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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/851,340 | 05/09/2001 | Barry Bronson | 10006196-1 | 3032 |

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

NGUYEN, KIMNHUNG T

| ART UNIT | PAPER NUMBER |
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2674

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 09/851,340 | Applicant(s) BRONSON, BARRY | |
| | Examiner Kimnhung Nguyen | Art Unit 2674 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 02 March 2004.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-5, 7-11 and 13-21 is/are rejected.

7) ☒ Claim(s) 6, 12 is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____ |
|---|--|

DETAILED ACTION

This Application has been examined. The claims 1-21 are pending. The examination results are as following.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Massof et al. (US 6,529,331).

Massof et al. disclose in figure 11, a method of displaying image using a wearable display comprising determining an amount of distortion for image signal data (see column 6, lines 65-67), the distortion acting to distort a source image conveyed by the image signal data so that a field of view of view of the source image is expanded (see column 6, lines 65-67); adjusting the image (see image magnification change the position (see column 6, lines 65-67, column 7, lines 43-58) signal data so that source image conveyed by the image signal data is distorted to determine amount of distortion; generating a display signal using the adjusted image signal data; and displaying a distorted image on a display by using the display signal.

3. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massof et al. (US 6,529,331) in view of Green (US 5,124,659) and Garlick et al. (US patent 6,614,448)

Massof et al. disclose in figure 13, a method of displaying frames images using a wearable display device. However, Massof et al. do not disclose the display comprising generating an inner region display signal of the frame of an image, and generating an outer region; and determining a brightness from the inner region display signal; wherein the outer region is substantially lower resolution than inner region; and outer region of less than 5 cycles per degree resolution, or the inner region of at least 15 cycle per degree resolution, and ratio between an inner region and an edge of the source image of between 2:1 and 20:1.

Green discloses in figure 1 that pixel of a display device comprising generating an inner and outer regions (I, IV), and having brightness from inner or outer region (see column 3, lines 6-11). Garlick et al. disclose a graphic processor displays pixels in an image at non-uniform resolution by using a lower resolution and high resolution signal are used directly (see abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of using the regions and lower resolution and high resolution as taught by Green and Garlick et al. into the display system of Massof et al. because this would for providing the range of the levels to be achieved by appropriate selection of areas.

From the claims 3-4, 9-10, it would have been obvious to one of ordinary skill in the art at the time the invention to have an outer region of less than 5 cycles per degree resolution, or the inner region of at least 15 cycle per degree resolution, and ratio between an inner region and an edge of the source image of between 2:1 and 20:1 as claimed since such a modification would have involved a mere change in range/shape of the levels. A change in range/shape is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ (CCPA 1995) and

See In re Reven, 156 USPQ 679 (CCPA 1968).

4. Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massof et al. (US 6,529,331) in view of Green (US patent 5,124,659).

Massof et al. disclose a method of displaying frames images using a wearable display device as discussed above. However, They do not disclose wherein the distortion ratio between an inner region and an edge of the source image is between 2:1 and 20:1.

From the claims above, it would have been obvious to one of ordinary skill in the art at the time the invention to have an the distortion ratio between an inner region and an edge of the source image is between 2:1 and 20:1 as claimed since such a modification would have involved a mere change in range/shape of the levels. A change in range/shape is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ (CCPA 1995) and

See In re Reven, 156 USPQ 679 (CCPA 1968).

Allowable Subject Matter

5. Claims 6 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to a method of displaying frames of image using a wearable display device comprising generating an inner region display an outer region of the frame of image on the display or generating a display signal using the adjusted image signal data and displaying a distorted image on a display. The combination of prior art, Massof et al. (US 6,529,331) Tabata (5,579,026), Green (5,124,659) and Garlic et al. (6,614,448) disclose a similar system having generating an inner region display an outer region of the frame of image on the display or generating a display signal using the adjusted image signal data and displaying a distorted image on a display. However, they fail to teach wherein a displaying an outer region of the frame of the image comprises illuminating an array of white lights as claims 6 and 12.

Response To arguments

6. Applicant's argument filed on 3-2-04 has been fully considered but they are not persuasive in view of new ground rejection.

Applicant argues that the combination of Tabata, Green and Garlick do not disclose a generating an inner region display signal of the frame of an image and a generating an outer region. However, examiner respectfully disagrees with the argument because Green discloses a display having inner and outer regions and therefore, it should have a generating an inner

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region display signal of the frame of an image and a generating an outer region (because the generating will help the system for operating).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D. C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,
Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen
August 7, 2004


RICHARD HJERPE 8/9/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600